

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A single phase induction motor, comprising:

a stator installed in an inner circumferential surface of a motor body, a plurality of coils being wound on the stator;

a rotor rotatably installed in a center portion of the stator and provided with a rotation shaft at a center thereof; and

a magnet unit freely and roatably installed between the stator and the rotor, the magnet unit being separated from the stator by a first air gap and from the rotor by a second air gap, wherein the magnet unit comprises a back yoke and a plurality of magnets attached to an outer circumferential surface of the back yoke, said plurality of magnets substantially surrounding the entire outer circumferential surface of the back yoke,

wherein the magnet unit is coupled to a supporter, and the supporter is integrally injection-molded at one side of the magnet unit.

2-9. (Canceled)

10. (Previously Presented) The single phase induction motor of claim 1, wherein the magnet unit comprises:

a supporter coupled to one end of the back yoke so as to support the back yoke; and

a bearing press-fit into a center of the supporter so as to be rotatably coupled to an outer circumferential surface of the rotation shaft.

11. (Original) The single phase induction motor of claim 10, wherein the back yoke is a magnetic substance.

12. (Original) The single phase induction motor of claim 10, wherein the back yoke is a non-magnetic substance.

13. (Original) The single phase induction motor of claim 10, wherein the supporter is integrally injection-molded at one side of the back yoke.

14. (Original) The single phase induction motor of claim 10, wherein the supporter is integrally injection-molded at both sides of the back yoke.

15. (Previously Presented) The single phase induction motor of claim 10, wherein a thickness of the back yoke is 0.2~0.6mm.

16. (Previously Presented) The single phase induction motor of claim 22, wherein the magnet unit comprises:

- a molding located between the stator and the rotor;
- a magnet mounted in the molding;
- a supporter coupled to one end of the molding so as to support the molding; and
- a bearing press-fit into a center of the supporter so as to be rotatably coupled to an outer circumferential surface of the rotation shaft.

17. (Original) The single phase induction motor of claim 16, wherein the molding is a non-magnetic substance.

18. (Original) The single phase induction motor of claim 16, wherein the supporter is integrally injection-molded at one side of the molding.

19. (Original) The single phase induction motor of claim 16, wherein the supporter is integrally injection-molded at both sides of the molding.

20. (Previously Presented) The single phase induction motor of claim 16, wherein each of the plurality of magnets has a predetermined curvature and is arranged in the molding in a circumferential direction.

21. (Previously Presented) The single phase induction motor of claim 16, wherein the plurality of magnets form a cylindrical shape arranged in the molding.

22. (Currently Amended) A single phase induction motor, comprising:  
a stator installed in an inner circumferential surface of a motor body, a plurality of coils being wound on the stator;  
a rotor rotatably installed in a center portion of the stator and provided with a rotation shaft at a center thereof; and  
a magnet unit freely and rotatably installed between the stator and the rotor, the magnet unit being separated from the stator by a first air gap and from the rotor by a second air gap, wherein the magnet unit comprises a molding formed of resin and provided with a plurality of pockets therein, and a plurality of magnets ~~formed inside said molding~~ respectively mounted in the corresponding plurality of pockets such that the molding covers over an entire area of each magnet in both axial and circumferential directions of the molding, and wherein a supporter is integrally injection-molded at one side of the molding, ~~said molding completely surrounding each of said plurality of magnets.~~

23. (Currently Amended) A single phase induction motor, comprising:  
a stator installed in an inner circumferential surface of a motor body, a plurality of coils being wound on the stator;  
a rotor rotatably installed in a center portion of the stator and provided with a rotation shaft at a center thereof; and

a magnet unit freely and rotatably installed between the stator and the rotor, the magnet unit being separated from the stator by a first air gap and from the rotor by a second air gap, wherein the magnet unit comprises a ring magnet, wherein the magnet is coupled to a supporter, and the supporter is integrally injection-molded at one side of the ring magnet unit.

24. (Previously Presented) The single phase induction motor of claim 23, the magnet unit further comprises:

a supporter coupled to one end of the ring magnet for supporting the ring magnet; and

a bearing press-fit into a center of the supporter so as to be rotatably coupled to an outer circumferential surface of the rotation shaft.

25. (Previously Presented) The single phase induction motor of claim 23, wherein the supporter is a non-magnetic substance.

26. (Previously Presented) The single phase induction motor of claim 23, wherein the supporter is integrally injection-molded at one side of the ring magnet.

27. (Previously Presented) The single phase induction motor of claim 23, wherein the supporter is integrally injection-molded at both sides of the ring magnet.

28. (Previously Presented) The single phase induction motor of claim 23, wherein the supporter is formed of the same material as the ring magnet.

29. (Previously Presented) The single phase induction motor of claim 23, wherein the bearing is a ball bearing type.

30. (Previously Presented) The single phase induction motor of claim 23, wherein the bearing is an oilless bearing type.

31. (Previously Presented) The single phase induction motor of claim 23, wherein the ring magnet comprises a single magnetic element having a cylindrical shape.